

Claims

1 1. An isolated polynucleotide that encodes a *Bacillus thuringiensis* toxin
2 comprising an amino acid sequence selected from the group consisting of SEQ ID NO:2,
3 SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, and insecticidal fragments thereof.

1 2. The isolated polynucleotide according to claim 1 wherein said toxin
2 comprises an insecticidal fragment of SEQ ID NO:2.

1 3. The isolated polynucleotide according to claim 1 wherein said toxin
2 comprises an insecticidal fragment of SEQ ID NO:4.

1 4. The isolated polynucleotide according to claim 1 wherein said toxin
2 comprises an insecticidal fragment of SEQ ID NO:6.

1 5. The isolated polynucleotide according to claim 1 wherein said toxin
2 comprises an insecticidal fragment of SEQ ID NO:8.

1 6. The isolated polynucleotide according to claim 1 wherein said polynucleotide
2 comprises a fragment of the nucleotide sequence of SEQ ID NO:1 sufficient to encode an
3 insecticidal toxin.

1 7. The isolated polynucleotide according to claim 1 wherein said polynucleotide
2 comprises a fragment of the nucleotide sequence of SEQ ID NO:3 sufficient to encode an
3 insecticidal toxin.

1 8. The isolated polynucleotide according to claim 1 wherein said polynucleotide
2 comprises a fragment of the nucleotide sequence of SEQ ID NO:5 sufficient to encode an
3 insecticidal toxin.

1 9. The isolated polynucleotide according to claim 1 wherein said polynucleotide
2 comprises a fragment of the nucleotide sequence of SEQ ID NO:7 sufficient to encode an
3 insecticidal toxin.

1 10. A recombinant microbial or plant cell comprising an isolated polynucleotide
2 sequence comprising an amino acid sequence selected from the group consisting of SEQ ID
3 NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, and insecticidal fragments thereof.

1 11. The recombinant microbial or plant cell according to claim 10 wherein said
2 toxin comprises an insecticidal fragment of SEQ ID NO:2.

1 12. The recombinant microbial or plant cell according to claim 10 wherein said
2 toxin comprises an insecticidal fragment of SEQ ID NO:4.

1 13. The recombinant microbial or plant cell according to claim 10 wherein said
2 toxin comprises an insecticidal fragment of SEQ ID NO:6.

1 14. The recombinant microbial or plant cell according to claim 10 wherein said
2 toxin comprises an insecticidal fragment of SEQ ID NO:8.

1 15. The recombinant microbial or plant cell according to claim 10 wherein said
2 polynucleotide comprises a fragment of the nucleotide sequence of SEQ ID NO:1 sufficient
3 to encode an insecticidal toxin.

1 16. The recombinant microbial or plant cell according to claim 10 wherein said
2 polynucleotide comprises a fragment of the nucleotide sequence of SEQ ID NO:3 sufficient
3 to encode an insecticidal toxin.

1 17. The recombinant microbial or plant cell according to claim 10 wherein said
2 polynucleotide comprises a fragment of the nucleotide sequence of SEQ ID NO:5 sufficient
3 to encode an insecticidal toxin.

1 18. The recombinant microbial or plant cell according to claim 10 wherein said
2 polynucleotide comprises a fragment of the nucleotide sequence of SEQ ID NO:7 sufficient
3 to encode an insecticidal toxin.

1 19. A method for controlling lepidopteran insects which comprises administering
2 to said insects or to the environment of said insects a microbial or plant host transformed to
3 express a *Bacillus thuringiensis* toxin comprising an amino acid sequence selected from the
4 group consisting of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, and SEQ ID NO:8, and
5 insecticidal fragments thereof.

1 20. The method according to claim 19 wherein said toxin comprises an
2 insecticidal fragment of SEQ ID NO:2.

1 21. The method according to claim 19 wherein said toxin comprises an
2 insecticidal fragment of SEQ ID NO:4.

1 22. The method according to claim 19 wherein said toxin comprises an
2 insecticidal fragment of SEQ ID NO:6.

- 1 23. The method according to claim 19 wherein said toxin comprises an
1 insecticidal fragment of SEQ ID NO:8.

For the purpose of the present invention, the term "insecticidal fragment" refers to a fragment of a toxin which is capable of killing or inhibiting the growth of an insect.